Tennessee Regional Water-Supply Planning: General Observations and Conclusions

TACIR February 7, 2011

TN Regional Water-Supply Planning
Technical Working Group

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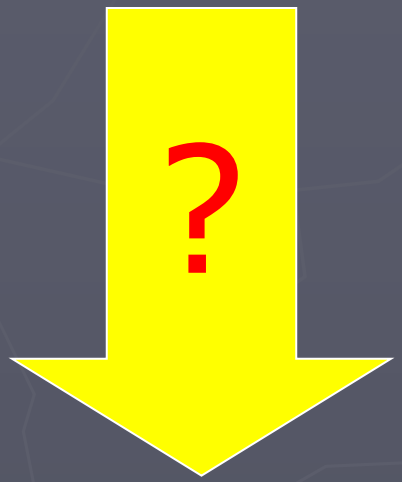
Water Supply Planning

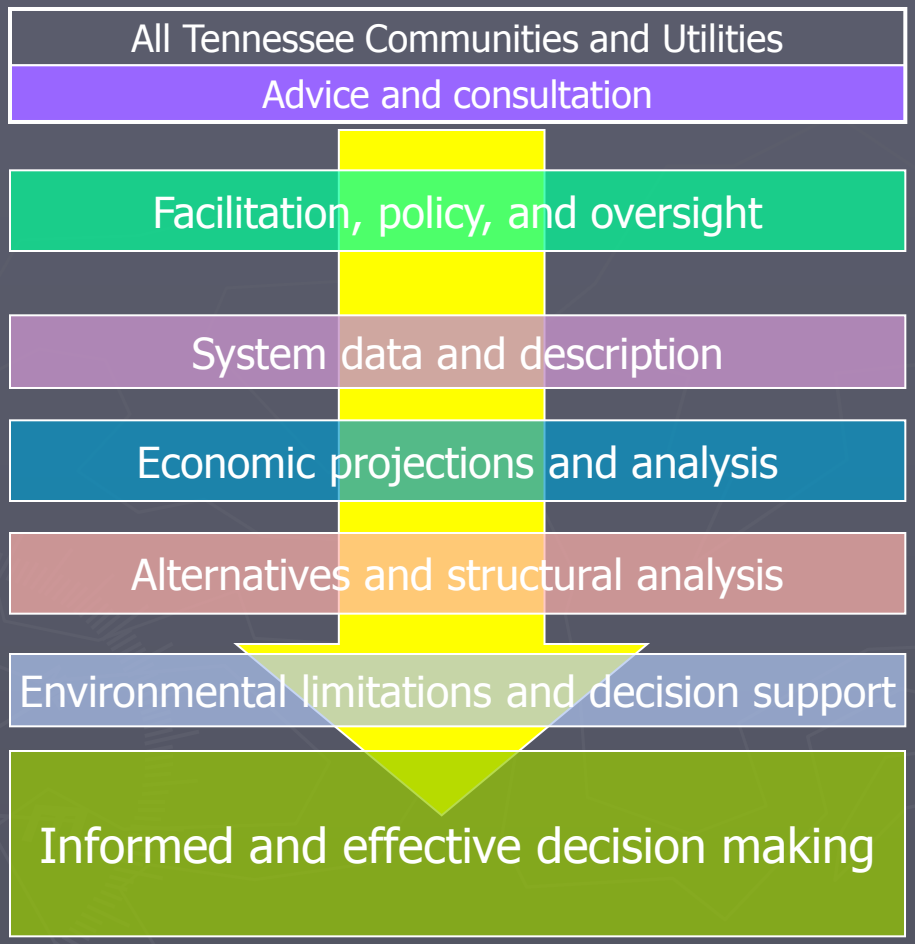
Objectives

Tennessee Communities, Utilities, Stakeholders



Informed and effective decision making for long-term economic and environmental health and sustainability

Water Supply Planning Pilots: designing a process



Consulting Engineers

State Government
and Regional Authorities

State and Federal agencies (USGS)
Universities

Universities, City planners, TVA etc.

Federal agencies (COE) and
consulting engineers

The Nature Conservancy, other NGO's

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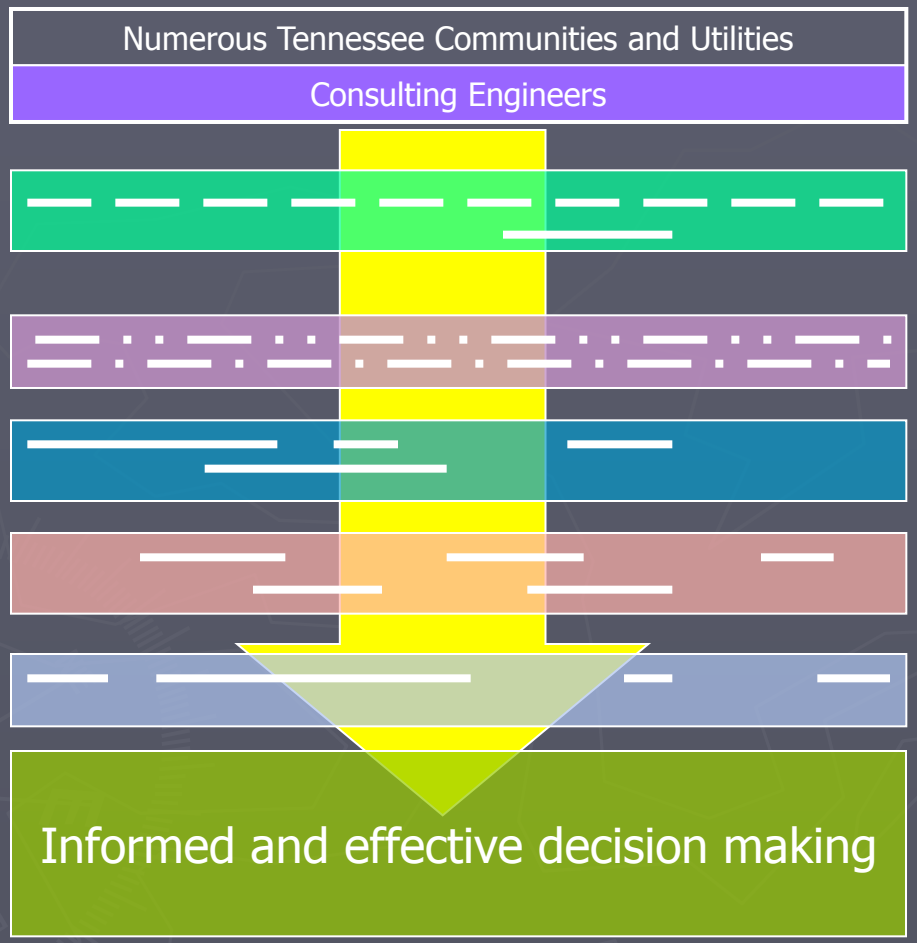
Identifying Gaps



Facilitation, policy, and oversight

System data and description

Economic projections and analysis

Alternatives and structural analysis

Environmental limitations and decision support

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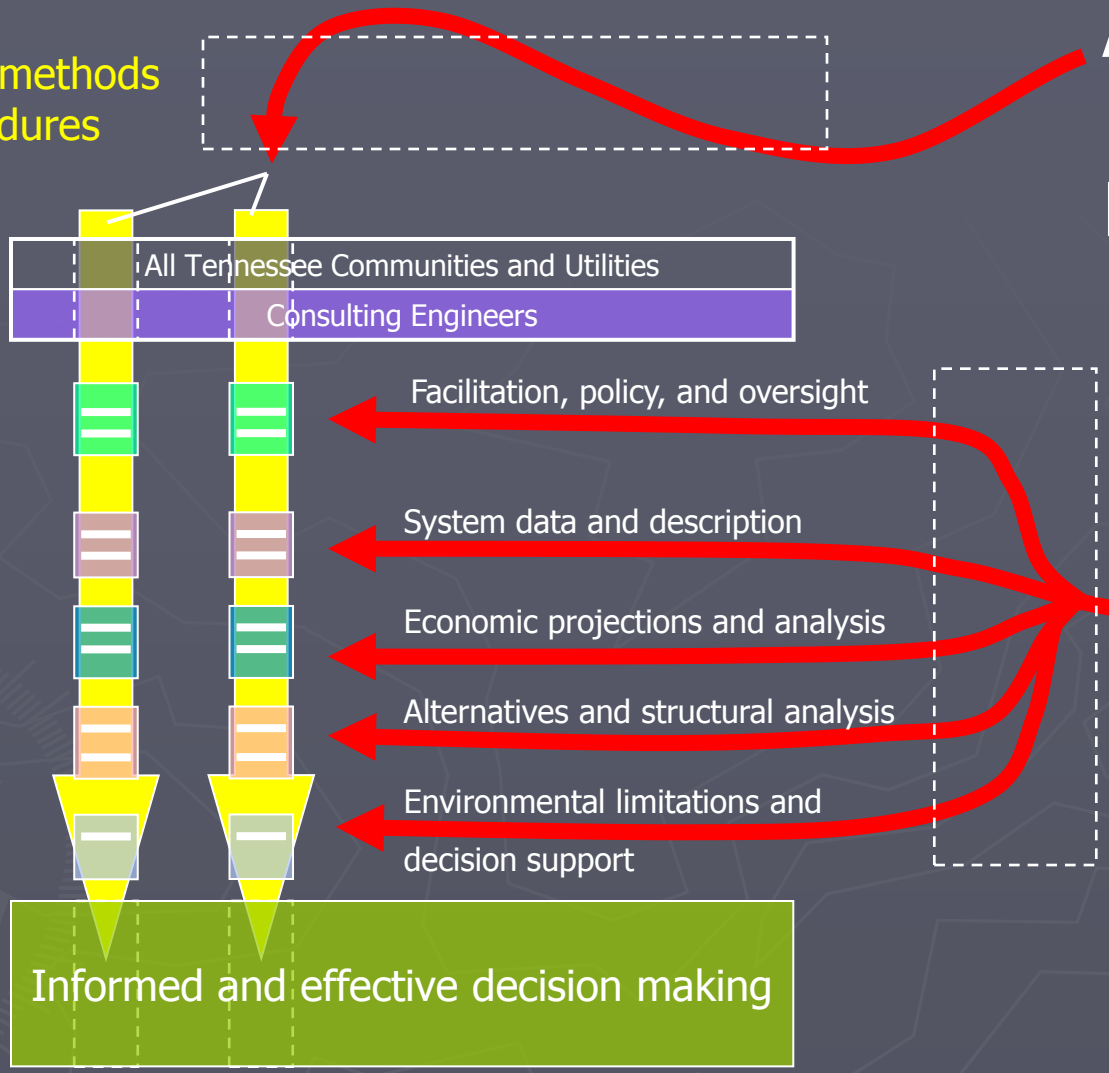
Two Outcomes

A. Specific

B. General

Analytical methods
And procedures



Decision Infrastructure: Supporting Agency Cooperation, Data, Policies, and Tools

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Collaborative Dialog: TWOG

- TACIR
- USACE
- USGS
- TDEC
- TDEC-WPC
- TDEC-DWS
- TAUD
- TWRA
- TNC
- TTU
- DRA
- HVUD
- UT
- Land Trust for Tennessee
- Municipal Governments and utilities

Recurring Themes:

- Reasons for regional planning
- The nature of a good plan
- Necessary support
- Good practice
- State-wide application

Reasons for regional planning

2. Growing interrelations among users demand that water-supply and drought-management plans address the needs of multiple interests within regions and watersheds and foster greater collaboration among local, state, and federal authorities…

Reasons for regional planning

1. Clean and reliable drinking water is vital to the State's economic well-being and the health of its citizens…

The nature of a good plan

3. Water supply plans should promote the long-term sustainability of the State's freshwater resources for the protection of multiple uses and users—including the protection of ecological integrity and biodiversity…

The nature of a good plan

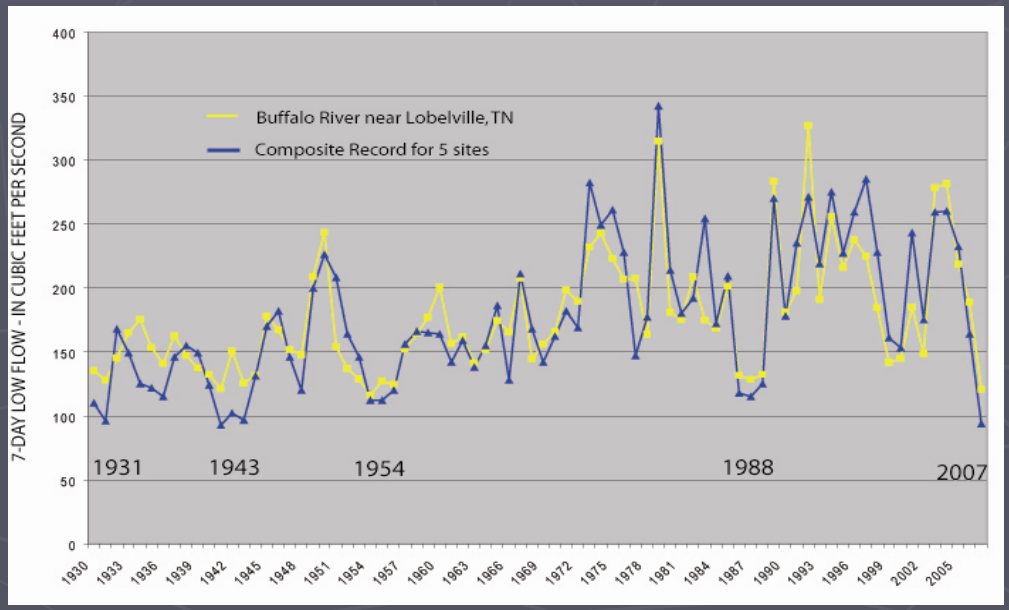
2. Water supply planning should consider economic and community development patterns including land-uses that may effect water quantity and quality region-wide…

The nature of a good plan

1. Plans for reliable water supplies should provide flexibility, use-efficiency, and risk management with margins of safety…

Necessary support

2. Accurate descriptions of current and historic patterns of water availability (hydrology) and competing demands are essential to planning at regional and larger scales—these data must be regionally consistent and comprehensive…



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Necessary support

1. Timely monitoring and reporting of regional water resource use and system characteristics are essential to support water-supply planning at any scale or timeframe…

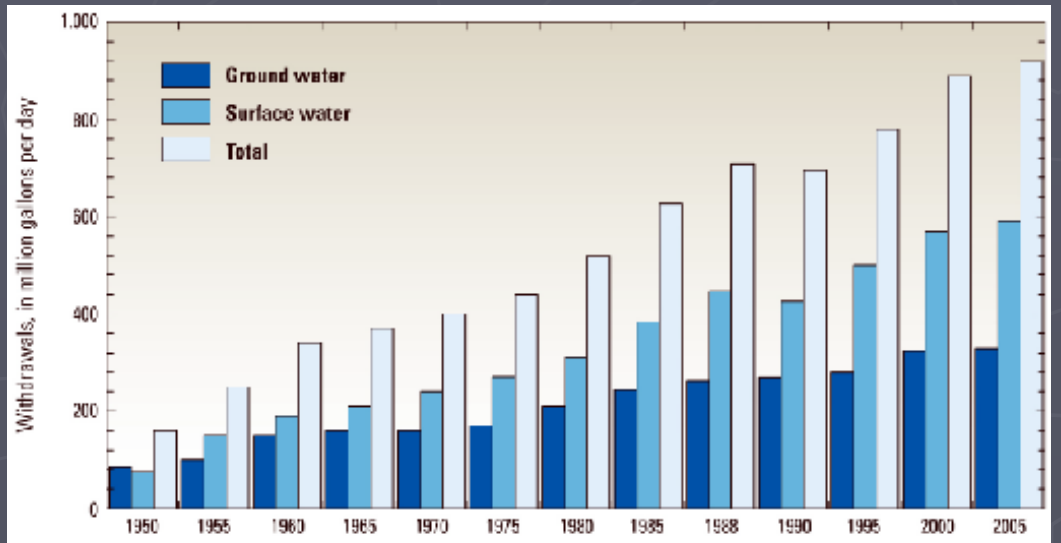

Figure 4. Surface-water and ground-water withdrawals by public water-supply systems in Tennessee, 1950 to 2005.

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Good practice

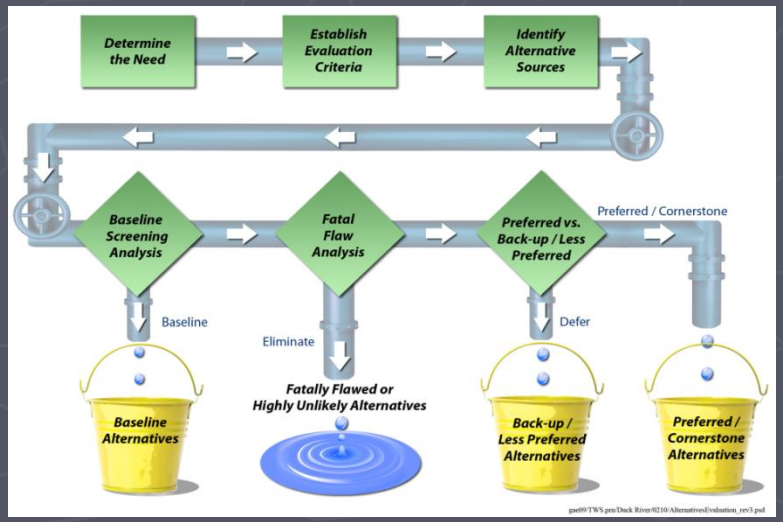
3. Open cooperation and joint commitment to planning among multiple water utilities in a region encourages the most efficient use of regional water-supply and financial resources. Third-party mediation may at times be useful to improve trust and perceptions of fairness…

Good practice

2. Good financial management dictates that users pay the full price of services. Regional planning is most effective when systems are accountable for the full cost of their decisions…

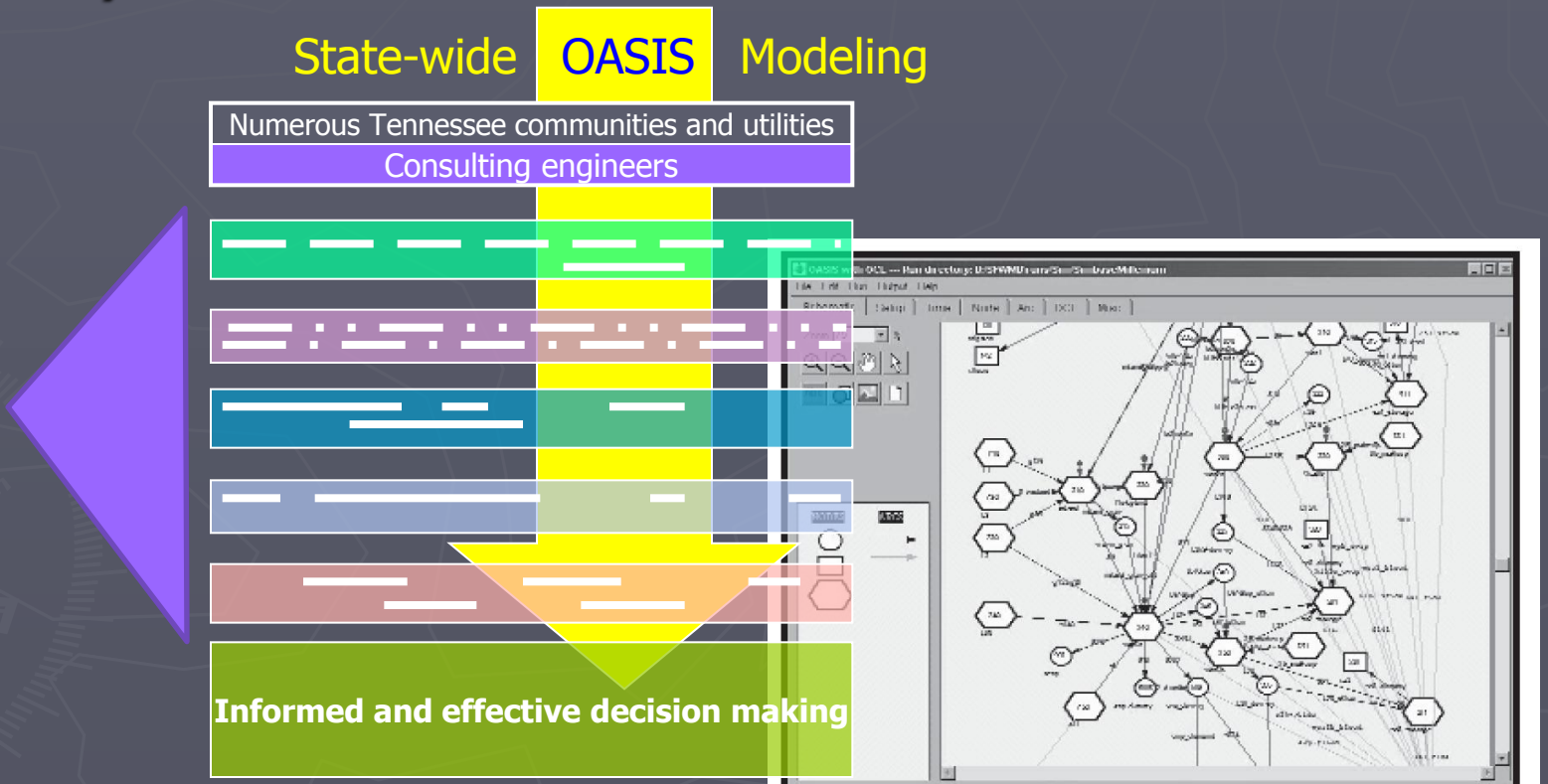
Good practice

1. Regional planning is enhanced when funding and regulatory agencies favor appropriate regional planning in applications concerning grants and permits—particularly where public funding may be involved or the feasibility of alternatives is at issue…



State-wide application

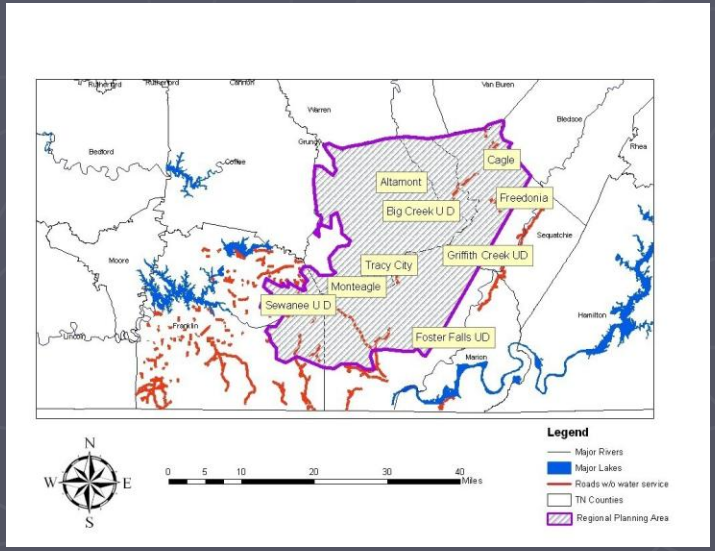
2. Supporting a common model and language (OASIS)…



Example of the Graphical User Interface (GUI) from OASIS

State-wide application

1. Defining regions, the content and character of "regional plans," and a system to incorporate change…



Next Steps

- Recommendations
- General report